WHAT IS CLAIMED IS:

1. A method for transforming a part of a target semiconductor substrate to be a non-semiconductor material, comprising:

generating one or more low energy beams by an electro-magnetic radiation source for aligning at least one mask with a predetermined target semiconductor substrate;

generating a predetermined amount of high energy particles by a high energy source; and

passing the high energy particles generated by the high energy source through a mask target area of the mask to land on a predetermined area on the predetermined target semiconductor substrate for transforming the semiconductor material thereon to be the non-semiconductor material after the predetermined area receives the high energy particles with a collective energy level exceeding a predetermined threshold.

2. The method of claim 1 further comprising dissipating heat energy generated by the high energy particles on the mask.

3. The method of claim 2 wherein the dissipating further includes attaching one or more heat sinks on the mask without blocking an alignment area of the mask and the mask target area.

4. The method of claim 1 wherein the mask set has one or more masks with their corresponding mask target areas aligned in sequence for downsizing the mask target areas sequentially thereby concentrating the high energy particles on the predetermined area.

5. The method of claim 4 wherein the mask target areas of the one or more masks have different passing rates for the high energy particles.

6. The method of claim 1 further comprising confining and absorbing radiations caused by the high energy particles.

7. The method of claim 1 wherein the mask target area is an aperture.

8. The method of claim 1 wherein the mask target area is made of a material that is different from the rest of the mask with an improved particle passing rate to assure that the collective energy exceeds the predetermined threshold.

9. The method of claim 1 wherein the predetermined threshold is above 1 MeV.

10. A system for concentrating high energy particles on a predetermined area on a target semiconductor substrate, comprising:

a high energy source for generating a predetermined amount of high energy particles;

an electro-magnetic radiation source for generating one or more low energy beams; and

a mask set exposed to the high energy source and the electro-magnetic radiation source, the mask set having at least one mask with at least one alignment area and at least one mask target area thereon, the mask target area passing more high energy particles than any other area of the mask,

wherein the mask is aligned with the predetermined target semiconductor substrate using the low energy beams,

wherein the high energy particles generated by the high energy source pass through the mask target area to land on the predetermined area on the target semiconductor substrate, and

wherein the predetermined area receives the high energy particles with a collective energy exceeding a predetermined threshold.

11. The system of claim 10 further comprising at least one protection shield for protecting the alignment area from being exposed to the high energy particles.

12. The system of claim 11 wherein the protection shield includes one or more heat sinks fixed on the mask without blocking the alignment area for dissipating heat energy generated by the high energy particles.

13. The system of claim 11 wherein the protection shield is attached to the electro-magnetic radiation source.

14. The system of claim 11 wherein the protection shield is attached to the mask.

15. The system of claim 10 wherein the mask set has one or more masks with their corresponding mask target areas aligned in sequence for sequentially downsizing a resulting area for passing the high energy particles, thereby concentrating the high energy particles on the predetermined area.

16. The system of claim 10 wherein the mask target area is an aperture.

17. The system of claim 10 wherein the mask target area is made of a material that is different from the rest of the mask with an improved particle passing rate to assure that the collective energy exceeds the predetermined threshold.

18. The system of claim 17 wherein the mask target area is made of a thin material selected from a group consisting of Si based material, Al based material, and W based material.

19. The system of claim 17 wherein the rest of the mask is made of a Quartz based material.

20. The system of claim 17 wherein the rest of the mask is made of a silicon oxide based material.

21. The system of claim 10 wherein the predetermined threshold is in a range between 1 to 5 MeV.

22. The system of claim 10 wherein the predetermined threshold is about 3 MeV.

23. A system for forming a semi-insulator area on a target semiconductor substrate, comprising:

a high energy source for generating a predetermined amount of high energy particles;

an electro-magnetic radiation source for generating one or more low energy beams; and

a mask set having at least one mask with at least one alignment area and

at least one mask target area thereon, the mask target area passing more high energy particles then any other area of the mask,

wherein the mask is aligned with the predetermined target semiconductor substrate by using the low energy beams, and

wherein the high energy particles generated by the high energy source with a collective energy exceeding a predetermined threshold pass through the mask target area to transform the predetermined area on the target semiconductor substrate into the semi-insulator area.

24. The system of claim 23 wherein the mask set has one or more masks with their corresponding mask target areas aligned in sequence for sequentially downsizing a resulting area for passing the high energy particles, thereby concentrating the high energy particles on the predetermined area.

25. The system of claim 23 wherein the mask target area is an aperture.

26. The system of claim 23 wherein the mask target area is made of a material that is different from the rest of the mask with an improved particle passing rate to assure that the collective energy exceeds the predetermined threshold.

27. The system of claim 26 wherein the mask target area is made of a thin material selected from a group consisting of Si based material, Al based material, and W based material.

28. The system of claim 27 wherein the rest of the mask is made of a Quartz or silicon oxide based material.

29. The system of claim 23 wherein the predetermined threshold is in a range between 1 and 5 MeV.

30. The system of claim 23 wherein the predetermined threshold is above 3 MeV.

31. The system of claim 23 further comprising at least one protection shield inserted between the electro-magnetic radiation source and the mask set for protecting the alignment area of the mask from being exposed to the high

energy particles.

32. The system of claim 31 wherein the protection shield is attached to the electro-magnetic radiation source.

33. The system of claim 31 wherein the protection shield is attached to the mask.

34. The system of claim 33 wherein the protection shield includes one or more heat sinks fixed on the mask without blocking the alignment area for dissipating heat energy generated by the high energy particles.

35. A system for forming a semi-insulator area on a target semiconductor substrate, comprising:

a high energy source for generating a predetermined amount of high energy particles;

a low energy electro-magnetic radiation source for generating low energy beams;

at least one protection shield inserted between the low energy electro-magnetic radiation source and the mask set for protecting the alignment area of the mask from being exposed to the high energy particles; and

a mask set having at least one mask with at least one alignment area and at least one mask target area thereon, the mask target area passing more high energy particles then any other area of the mask,

wherein the mask is aligned with the predetermined target semiconductor substrate by using the low energy beams, and

wherein the high energy particles generated by the high energy source with a collective energy exceeding a predetermined threshold pass through the mask target area to transform the predetermined area on the target semiconductor substrate into the semi-insulator area.